

CLAIMS

WHAT IS CLAIMED IS:

1. In an automatic call distribution system, a method for routing incoming calls from callers to agents associated with the automatic call distribution system, at least some of the incoming calls based on non-voice dialog communication, the method comprising:

identifying a plurality of transaction-handling skills representative of skills possessed by the agents in handling the non-voice dialog communication;

for each agent,

determining a skill level possessed by the agent for at least some of the plurality of transaction-handling skills;

forming an agent profile corresponding to the determined skill levels;

assigning a weight to each determined skill level;

identifying agents who are available to handle the incoming call;

selecting an available agent based on the determined skill levels; and

transferring the incoming call to the selected agent.

2. The method according to claim 1 wherein the transaction-handling skills are not based on product knowledge.

3. The method according to claim 1 wherein the agent profile is in the form of at least one of an array, a matrix, a database and a data structure.

4. The method according to claim 1 wherein the transaction-handling skills are not related to a subject matter of the non-voice dialog communication.

5. The method according to claim 1 further including the step of determining an overall skill level for each agent based upon the weighted determined skill levels.

6. The method according to claim 5 wherein the incoming call is transferred to the available agent having a highest overall skill level.

7. The method according to claim 5 wherein the agents are entered into an agent list and sorted according to the overall skill level and wherein the incoming call is transferred to the first agent in the agent list.

8. The method according to claim 1 wherein the incoming call is transferred to the agent based upon at least one of the agent's determined skill levels and overall skill level, and a length of time that the agent has been idle.

9. The method according to claim 1 wherein the agent profile includes an indication of call-handling capacity for each agent, the call-handling capacity representative of the number of non-voice dialog communications the agent is capable of handling simultaneously.

10. The method according to claim 9 further including the step of calculating an agent capacity quotient by dividing the number of calls an agent is currently handling by the agent's call-handling capacity, said quotient representative of the number of calls an agent is currently handling relative to the agent's call-handling capacity.

11. The method according to claim 10 wherein the incoming call is transferred to the agent based upon the calculated skill levels and the agent capacity quotient.

12. The method according to claim 10 wherein selection of the agent to receive the incoming call based on the agent capacity quotient optimizes a work load of the agent.

13. The method according to claim 1 wherein the transaction-handling skills are selected from the group consisting of typing speed, typing accuracy, reading speed, reading comprehension, ability to handle multiple simultaneous transactions, experience level in handling non-voice dialog communications, agent response time, and context switching speed.

14. The method according to claim 1 wherein the skill levels for some of the transaction-handling skills are calculated using techniques selected from the group consisting of assigning a default level, assigning a skill level by a supervisor based on observation of the agent, assigning a skill level based on results of standardized tests, and assigning a skill level based on automatic monitoring of the agent's transactions.

15. The method according to claim 13 wherein the skill level for at least one of said typing speed, said typing accuracy, and said context switching speed is calculated based on automatic monitoring of a predetermined number of past non-voice dialog communications handled by the agent.

16. The method according to claim 15 wherein the skill level for said typing accuracy is automatically monitored using a spelling checking software program.

17. The method according to claim 13 wherein the skill level for said reading comprehension is determined based on results of standardized tests.

18. The method according to claim 15 wherein the skill level for at least one of said typing speed, said typing accuracy, and said context switching speed is periodically updated based upon the automatic monitoring.

19. The method according to claim 15 wherein the automatic monitoring is performed for a predetermined period of time.

20. The method according to claim 15 wherein the automatic monitoring is performed for a predetermined number of non-voice dialog communications handled by the agent.

21. In an transaction processing system, a method for routing incoming calls from callers to agents associated with the transaction processing system, at least some of the incoming calls based on non-voice dialog communication, the method comprising:

identifying a plurality of transaction-handling skills representative of skills possessed by the agents in handling the non-voice dialog communication;

for each agent,

determining a skill level possessed by the agent for at least some of the plurality of transaction-handling skills;

forming an agent profile corresponding to the determined skill levels;

assigning a weight to each determined skill level;

determining an overall skill level for each agent based upon the weighted determined skill levels contained in the agent profile;

identifying agents who are available to handle the call;

selecting an available agent based on the overall skill level; and

transferring the incoming call to the selected agent.

22. The method according to claim 21 wherein the incoming call is transferred to the agent based upon the agent's overall skill level and a length of time that the agent has been idle.

23. The method according to claim 21 wherein the agent profile includes an indication of call-handling capacity for each agent, the call-handling capacity representative of the number of non-voice dialog communications the agent is capable of handling simultaneously.

24. The method according to claim 23 further including the step of calculating an agent capacity quotient by dividing the number of calls an agent is currently handling by the agent's call-handling capacity, said quotient representative of the number of calls an agent is currently handling relative to the agent's call-handling capacity.

25. The method according to claim 24 wherein the incoming call is transferred to the agent based upon the determined skill levels and the agent capacity quotient.

26. The method according to claim 24 wherein selection of the agent to receive the incoming call based on the agent capacity quotient optimizes a work load of the agent.

27. The method according to claim 21 wherein the transaction-handling skills are selected from the group consisting of typing speed, typing accuracy, reading speed, reading comprehension, ability to handle multiple simultaneous transactions, experience level in handling non-voice dialog communications, agent response time, and context switching speed.

28. The method according to claim 21 wherein the skill levels for some of the transaction-handling skills are calculated using techniques selected from the group consisting of assigning a default level, assigning a skill level by a supervisor based on observation of the agent, assigning a skill level based on results of standardized tests, and assigning a skill level based on automatic monitoring of the agent's transactions.

29. The method according to claim 27 wherein the skill level for at least one of said typing speed, said typing accuracy, and said context switching speed is calculated based on automatic monitoring of a plurality of past non-voice dialog communications handled by the agent.

30. The method according to claim 29 wherein the skill level for said typing accuracy is automatically monitored using a spelling checking software program.

31. The method according to claim 29 wherein the skill level for at least one of said typing speed, said typing accuracy, and said context switching speed is periodically updated based upon the automatic monitoring.

32. A transaction processing system configured to route incoming calls from callers to agents associated with the transaction processing system, at least some of the incoming calls based on non-voice dialog communication, the system comprising:

a plurality of agent terminals associated with the agent and with the processing system;

means for storing skill level data associated with the agents;

processing means coupled to the agent terminals and the means for storage, for identifying a plurality of transaction-handling skills representative of skills possessed by the agents in handling the non-voice dialog communication, the processing means configured to calculate a skill level possessed by each agent for at least some of the plurality of transaction-handling skills, generate an agent profile for each agent corresponding to the calculated skill levels, assign a weight to each calculated skill level for each agent, identify agents who are available to handle the incoming call, select an available agent based on the weighted calculated skill levels, and transfer the incoming call to the selected agent.

33. The system according to claim 32 wherein the incoming call is transferred to the agent based upon the agent's overall skill level and a length of time that the agent has been idle.

34. The system according to claim 32 wherein the agent profile includes an indication of call-handling capacity for each agent, the call-handling capacity representative of the number of non-voice dialog communications the agent is capable of handling simultaneously.

35. The system according to claim 34 wherein the processing means calculates an agent capacity quotient by dividing the number of calls an agent is currently handling by the agent's call-handling capacity.

36. The system according to claim 32 wherein the transaction-handling skills are selected from the group consisting of typing speed, typing accuracy, reading speed, reading comprehension, ability to handle multiple simultaneous transactions, experience level in handling non-voice dialog communications, agent response time, and context switching speed.

37. The system according to claim 32 wherein the skill levels for some of the

transaction-handling skills are calculated using techniques selected from the group consisting of assigning a default level, assigning a skill level by a supervisor based on observation of the agent, assigning a skill level based on results of standardized tests, and assigning a skill level based on automatic monitoring of the agent's transactions.

38. The system according to claim 32 wherein the skill level for at least one of said typing speed, said typing accuracy, and said context switching speed is periodically updated by the processing means based upon the automatic monitoring.

39. A transaction processing system configured to route incoming calls from callers to agents corresponding to agent terminals associated with the transaction processing system, the incoming calls based on non-voice dialog communication, the system comprising: a processor for identifying a plurality of transaction-handling skills representative of skills possessed by the agents in handling the non-voice dialog communication, the processor configured to calculate a skill level possessed by each agent for at least some of the plurality of transaction-handling skills, generate an agent profile for each agent corresponding to the calculated skill levels, assign a weight to each calculated skill level for each agent, identify agents who are available to handle the incoming call, select an available agent based on the weighted calculated skill levels, and transfer the incoming call to the selected agent.